CLAIMS

I claim:

1.   A method of programming a remote device, the method comprising:

transmitting computer code to the remote device using a wireless technique; and

writing the computer code to at least one memory device located in the remote device.

2.   The method of claim 1 wherein the wireless technique is an over-the-air technique.

3.   The method of claim 1 wherein the remote device is a cellular phone and wherein the computer code is transmitted over a cellular phone network.

4.   The method of claim 1 wherein the remote device is located on a mobile platform.

5.   The method of claim 1 wherein the computer code is transmitted as a plurality of packets.

6.   The method of claim 5 further comprising combining the plurality of packets into a complete code segment and detecting the presence of the complete code segment.

7.   The system of claim 1 wherein the at least one memory device is a programmable memory.

8.   The method of claim 7 wherein the programmable memory is selected from the group consisting of: an EPROM, and EEPROM, and a flash memory.

9.   The method of claim 1 further including, prior to writing the computer code, initiating a reboot of the remote device.

10.   A method of providing computer code to a programmable memory of a remote device, using a wireless communication technique, the method comprising:

downloading a code segment and storing the code segment in a
        first memory;
initiating a reboot of the remote device; and
burning the code segment into the programmable memory.

11.   The method of claim 10 wherein the wireless communication technique is an over-the-air technique.

12.   The method of claim 10 wherein the remote device is a cellular phone and wherein the code segment is downloaded across a cellular phone network.

13.   The method of claim 10 wherein the remote device is located on a mobile platform.

14.   The method of claim 10 wherein the remote device is located on a vehicle.

15.   The method of claim 10 wherein the programmable memory is selected from the group consisting of: an EPROM, and EEPROM, and a flash memory.

16.   The method of claim 10 wherein the code segment is transmitted as a plurality of packets.

17.   The method of claim 16 further comprising combining the plurality of packets into a complete code segment and detecting the presence of the complete code segment.

18.   A method for over the air programming of computer code at a remote platform having a local computer, the local computer including a flash memory, the method comprising:

        receiving a plurality of computer code packets, wherein the plurality computer code packets are provided by wireless transmission;

        storing the plurality of computer code packets in a memory of the local computer, wherein the plurality of computer code packets comprise the computer code;

        recognizing reception of a complete copy of the computer code at the local computer;

        shutting down and rebooting the local computer;

        burning the received computer code into the flash memory;

        erasing the stored computer code from the continuous memory; and

        restarting the local computer.

19.   The method of claim 18 wherein the remote platform is a mobile platform.

20.   The method of claim 18 wherein the mobile platform is a vehicle.

21.   A method for updating computer code in a remote computer, comprising:

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downloading a plurality of messages, each of the plurality of

messages comprising a segment of the computer code;

storing the downloaded computer code in non-volatile memory;

detecting when a complete set of the computer code comprising a

complete set of the plurality of messages have been

downloaded;

rebooting the remote computer;

starting a computer code burn in process, comprising:

    (i)   assembling the complete set of the computer code

        into a continuous memory,

    (ii)   burning the computer code into a flash memory of

        the remote computer;

    (iii)   deleting the stored computer code from the non-

        volatile memory; and

    (iv)   rebooting the remote computer.

22.   The method of claim 21 wherein the remote platform is a mobile platform.

23.   The method of claim 21 wherein the mobile platform is a vehicle.

24.   A remote device for receiving and storing a computer code update, the device comprising:

a receiver for receiving the computer code update;

a programmable memory; and

a microcontroller adapted to execute code for writing the computer

code update into the programmable memory.

25.   The system of claim 22 wherein the programmable memory is selected from the group consisting of: an EPROM, and EEPROM, and a flash memory.

26.   The device of claim 22 wherein the remote device is located on a mobile platform.

27.   The device of claim 22 wherein the microprocessor executes code for performing the following steps:

assembling the computer code update into a memory;

burning the computer code into the programmable memory;

deleting the computer code update from the memory; and

rebooting the remote device.

28.   A system for over the air programming of computer code in a local computer having a flash memory, the system comprising:

a central location that distributes updated computer code to the local computer using a plurality of computer code packets over a wireless transmission medium;

a receiver at the local computer that receives the updated computer code;

a non-volatile memory at the local computer that stores the updated computer code;

a detection module at the local computer that detects when all required computer code packets have been stored, and initiates a reboot process:

an burner program that checks the non-volatile memory for all required computer code packets, assembles the computer code packets into computer code, burns the computer code into the flash memory, and erases the computer code from the stored updated computer code from the non-volatile memory; and

a reboot program that reboots the local computer after burning the computer code into the flash memory.

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29.   The system of claim 28 wherein the local computer is located on a mobile platform.

30.   The system of claim 28 wherein the mobile platform is a truck.

31.   A processor on a mobile platform, the processor capable of being updated using software received over the air, the processor comprising:

flash memory adapted to allow a software update to be burned in;

a burner program; and

a message processor program.

32.   The processor of claim 31 wherein the message processor program comprises:

a detection routine that detects when a complete software update is received at the processor; and

a reboot routine that directs a reboot when the detection module detects the complete software update.

33.   The processor of claim 31, wherein the burner program comprises:

an assembly routine that assembles software packets comprising the complete software update;

a decompression routine that decompresses compressed software packets;

a validation routine that error checks the software packets; and

a programmable memory burner routine that burns the software update into the flash memory.

34.   The processor of claim 31 wherein the processor is shutdown and restarted after receipt of the complete software package.

35.   An apparatus that provides over the air programming of a host processor, the apparatus comprising:

means for receiving software over the air;

means for burning in the received software; and

means for rebooting the processor.

36.   The apparatus of claim 35, wherein the means for burning in the received software, comprises:

means for verifying that a complete package of the software is received; and

means for signaling when the complete package is received, wherein the means for burning in burns the complete software package into a flash memory of the processor.